(c) if so, whether any agreement in this regard has been reached;

(d) if so, the details of terms and conditions thereof; and

(e) the time by which these projects are likely to be finalised and the power to be generated from these projects ?

THE MINISTER OF STATE OF THE MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTER OF STATE OF THE MINISTRY OF POWER (SHRI YOGINDER K. ALAGH) : (a) No. Sir.

(b) to (e) The offer made by the German companies is under examination.

Train Accidents

381. SHRI BASUDEV ACHARIA :
SHRI RUPCHAND PAL :

Will the Minister of RAILWAYS be pleased to state :

(a) the number of train accidents and derailments took place during the months of May and June, 1997 zone-wise;

(b) the reasons for such accidents and derailments; and

(c) the steps taken to minimise the recurrence of such incidents in future ?

THE MINISTER OF RAILWAYS (SHRI RAM VILAS PASWAN) : (a) Zone-wise information regarding number of consequential train accidents during May and June, 1997 is as under :

Central 21 (17), Eastern 6 (5), Northern 12 (6), N.E. 5 (3), N.F. 1(1), Southern 10(8), S.C. 12(10), S.E. 14(12), Western 6(6), Konkan 2(2), Total 89 (70).

Note : Figures within brackets pertain to derailments.

(b) Main causes of these accidents were human failure, equipment failure, sabotage and incidental factors.

(c) Some of the measures taken to improve safety and prevent accidents are as under :-

(i) The work of track circuiting has been accelerated on the trunk routes and other important main lines.

(ii) Modification of the signalling circuitry is being carried out to minimise chances of human errors in causing accidents.

(iii) Auxiliary Warning System for giving advance warning about 'Signal at danger' to the driver of the running train has been commissioned on Bombay suburban sections.

(iv) There has been progressive increase in use of Tie Tamping and ballast cleaning machines for track maintenance.

(v) For monitoring track geometry and running characteristics of the track, sophisticated track recording cars, oscillograph cars and portable accelerometers are being progressively used.

(vi) Maintenance facilities for coaches and wagons have been modernised and upgraded at many depots.

(vii) To prevent cases of cold breakage of axles, ROH Depots have been equipped with ultrasonic testing equipment for detection of flaws in the axle.

(viii) Whistle boards/speed breakers and road signs have been provided at unmanned level crossings and visibility for drivers has been improved.

(ix) Audio-visual publicity campaigns to educate road users on how to make a safe crossing are conducted.

(x) Steps have been taken to prevent inflammable and explosive materials from being carried in passenger trains.

(xi) Training facilities for drivers, guards and staff connected with train operation have been modernised including use of Simulators for training of drivers.

(xii) Refresher courses regularly organised at specified intervals.

(xiii) Performance of the staff connected with train operation is being constantly monitored and those found deficient are sent for crash training.

(xiv) Periodical safety drivers are conducted to inculcate safety consciousness among the staff.